Fall 9-1-2021

M 105.50: Contemporary Mathematics

Deborah Ann Pearlman
University of Montana, Missoula, deborah.pearlman@umontana.edu

Contemporary Mathematics (M105-Online Section)

Syllabus – Fall 2021

Instructor Information

- ✓ **Instructor:** Deborah Pearlman deborah.pearlman@umontana.edu
  Office Hours: Zoom *TBD*

Catalog Description:

M105 - Contemporary Mathematics Credits: 3. Offered every term. Prereq. M 090 with a grade of C or better, or M 095, or M01 placement ≥17, or ALEKS placement≥3, or ACT score of 22, or SAT score of 550 (with the new test), or completion of the M105 EdReady module. An introduction to mathematical ideas and their impact on society. Intended for students wishing to satisfy the general education mathematics requirement.

Learning Outcomes:

This course illustrates several ways in which mathematics occurs in the "real world". We will explore some topics of general interest not typically taught in a formal mathematics class. The goal is for you to see not only how much math is around you, but also some of its history, beauty, and influence on modern thinking.

Upon completion of this course, students will be able to:

1. Read mathematical material at an appropriate level, reason mathematically, and write using mathematical notation correctly.
2. Formulate a problem precisely, and interpret solutions.
3. Apply elementary probability theory to construct models of random phenomena, including the use of simulations.
4. Use elementary statistical tools such as measures of center and spread, graphical representations of data, and statistical estimation of population proportions.
5. Use tools from one or more areas of mathematics to solve theoretical or applied problems. The areas could include, but are not limited to, finance, management science (e.g., graph models for network problems), social choice and decision-making (e.g., elections, voting, fair division, Congressional apportionment), geometry (e.g., symmetry, tilings), mental math, and mathematical games.

General Education:

Upon completion of the mathematical literacy requirement, a student will be able to apply effectively mathematical or statistical reasoning to a variety of applied or theoretical problems.

Required Materials:

- **Text:** *Math in Society* (Lippman). This is a *free* open educational resource (OER) textbook and is available to download through a link on the **MyOpenMath.com** site. You can order a printed copy as well through Lulu.com or Amazon for a small fee. Please note that each text section is linked to every section on the math site MyOpenMath.
- **Online Homework:** Create a student account at **MyOpenMath.com** and "Enroll in a New Class" on your home page. Enter the information below.

Course ID: 123241 ***Enrollment key:*** Pearlman12345

Watch this YouTube video for an orientation on working with MyOpenMath.

- **Scientific calculator:** Most scientific calculators will work. If you have access to a TI-83 or TI-84 many computations will be shorter. Demonstrations will be done with a TI-84 and Desmos. Graphing calculators with symbolic capability (such as TI-89, TI-92), cell phone or tablet calculators, and other "smart" devices are forbidden on all assessments.

Grading:

Your final course grade is assigned accordingly:

40%	Quizzes/Projects
25%	Online Homework
35%	Activities and Participation
0%	Final exam

Grade	*Grading Scale by Percentages*
A	90%+
B	89-80%
C	79-65%
D	64-55%
F	Less than 55%
CR	≥ 55%

This class uses research-based methods in an active-learning format with frequent classroom discussions. Attendance and participation are essential for success. Attendance is taken at random intervals throughout the semester.

All due dates (including quizzes) will be announced in class and posted on MyOpenMath. All assignment due dates are announced well in advance, along with posting on MyOpenMath. It is your responsibility to keep up to date on all such announcements.

Extensions and make-ups are only made with advance notice and instructor permission (before the due date). Missed due dates without instructor contact are recorded as 0, with exceptions granted for extenuating circumstances (serious illness or hospitalization, death in the family).

> **NOTE:** If you are taking this course to fulfill a general education requirement or a requirement for your major or minor, you must take it for a traditional letter grade (not CR/NCR). If you decide to take this course with CR/NCR grading, a "D" is passing and will earn credit for the course. ***It will NOT*** fulfill your general education requirement NOR any requirement for your major or minor.

Incomplete (I) Grades:

You must meet these conditions for an incomplete:

1. Attendance greater than 80% and a passing grade (C or better) up to 3 weeks before the semester ends; and
2. Inability to complete the course due to extenuating circumstances, which usually means serious illness or death in the family; and
3. A written agreement on how the course requirements will be completed within 12 months. If the incomplete will automatically revert to the grade assigned at the time of the incomplete.

Incompletes are only given at the discretion of the instructor, per University of Montana policies and procedures. See the current catalog for further information.

Important Dates:

- Sept. 8: Last day to add/drop, or change grading option on CyberBear
- Sept 20: Last day to drop on Cyberbear with refund. Last day to withdraw from all classes with a partial refund. Last day to buy or refuse UM student health coverage.
- Nov. 1: Last day to drop with instructor and advisor approval in CyberBear ($10 fee applies). Last day to change grading options using CyberBear.
- Nov 2 - Dec 10: Drop using the Course Add/Change/Drop link with instructor and advisor permission ($10 fee applies). A "WP" or "WF" will appear on the transcript. Change grading options using Course Add/Change/Drop link.
- Dec 10: Last day of class
- Dec 24: Grades posted to CyberBear – the best gift of all!

University Holidays:

- September 6: Labor Day. No school.
- November 11: Veterans Day. No school.
- November 24-26: Thanksgiving Holiday and travel. No school.

Misconduct:

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code.

Disability modifications:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or call 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.